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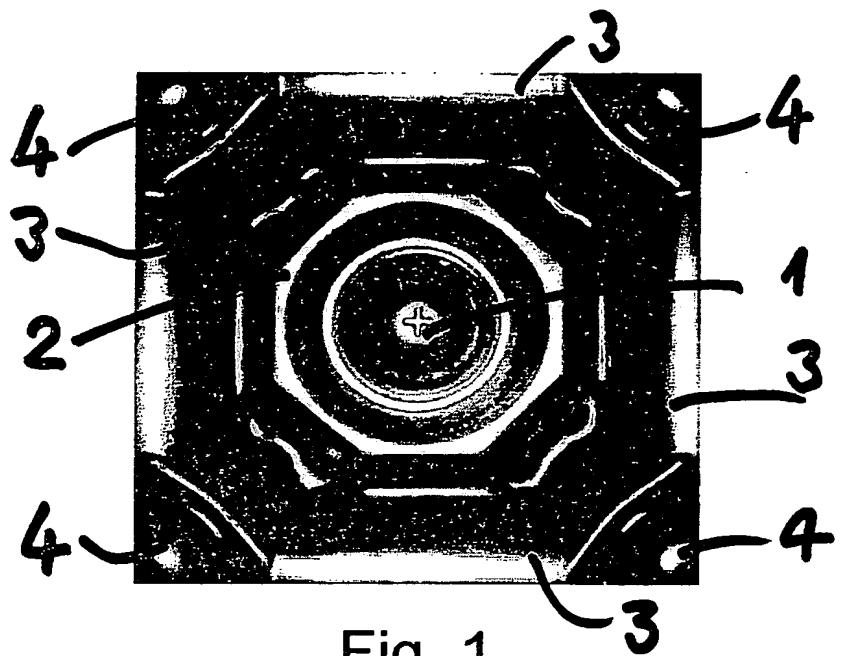


Fig. 1

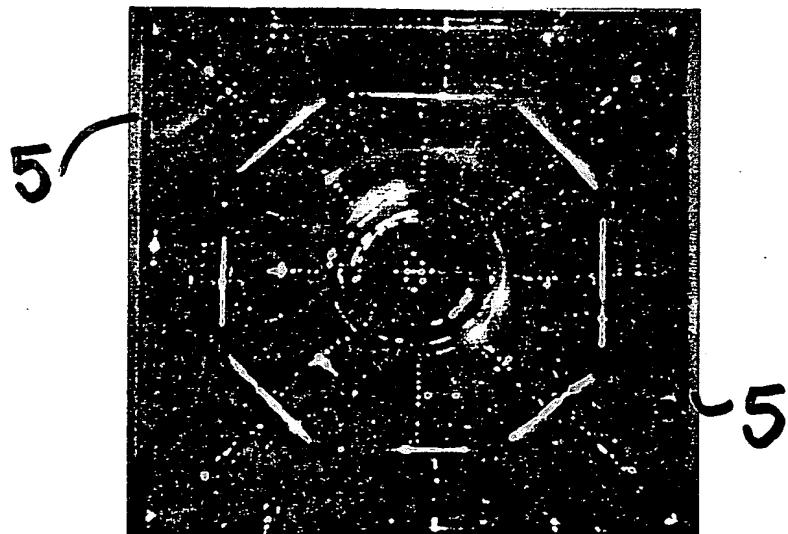


Fig. 2

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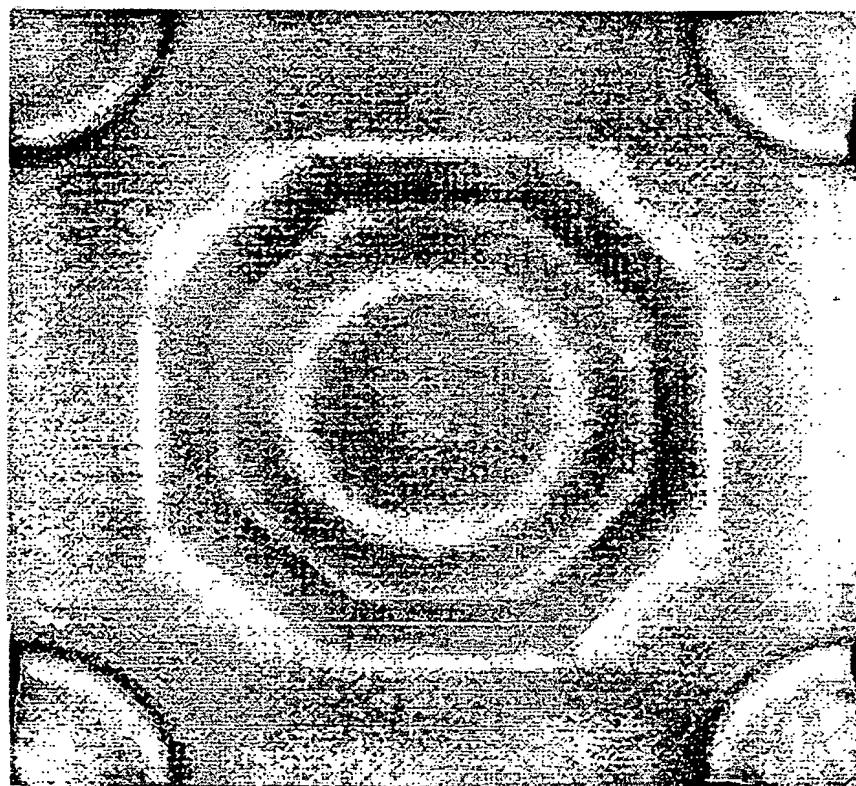


Fig. 1 A

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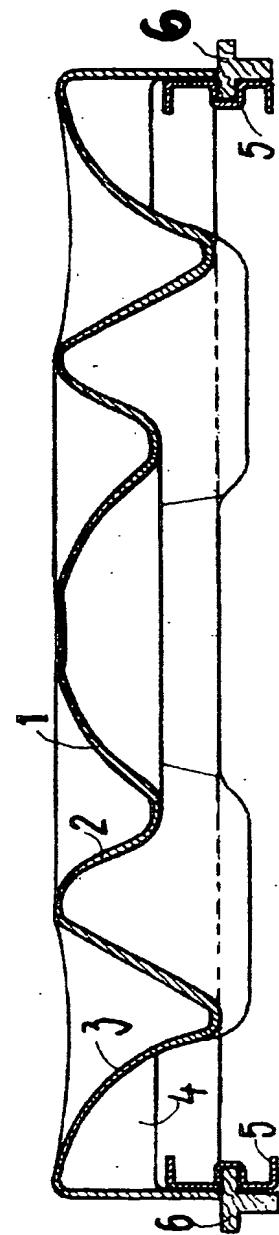


Fig. 3

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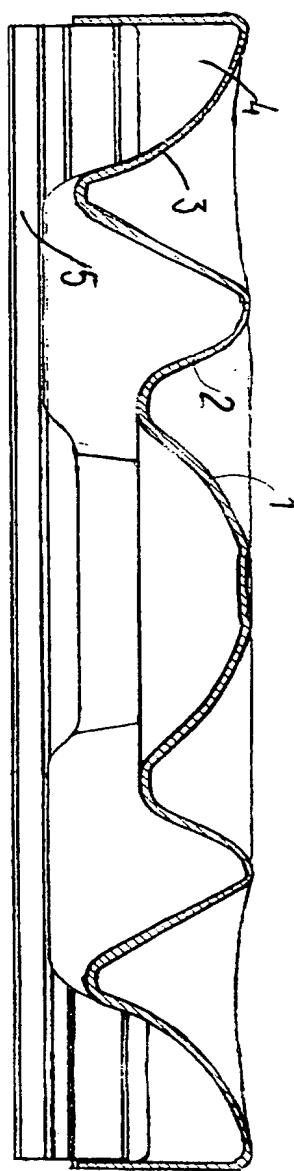


Fig. 4

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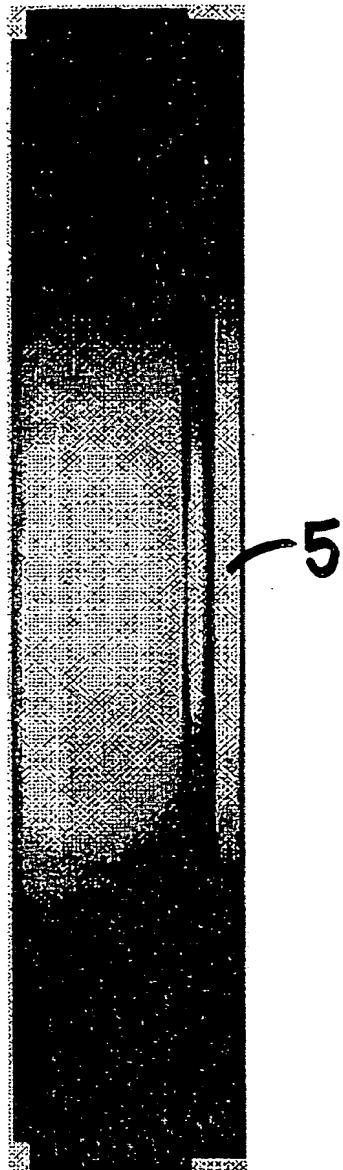
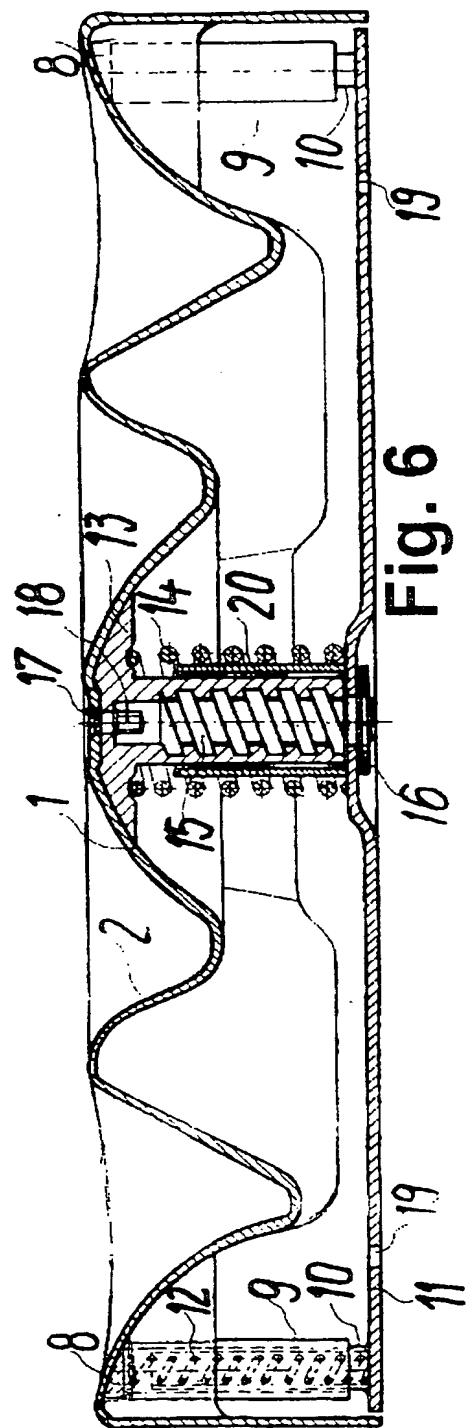


Fig. 5

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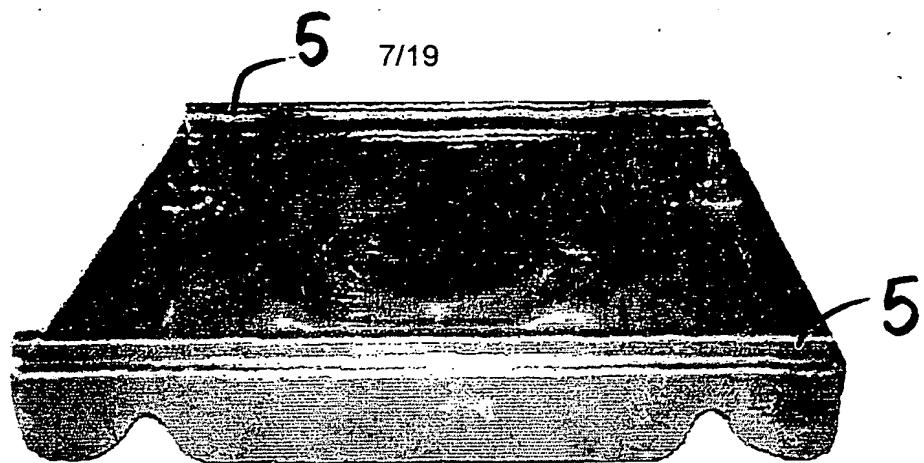


Fig. 7 A

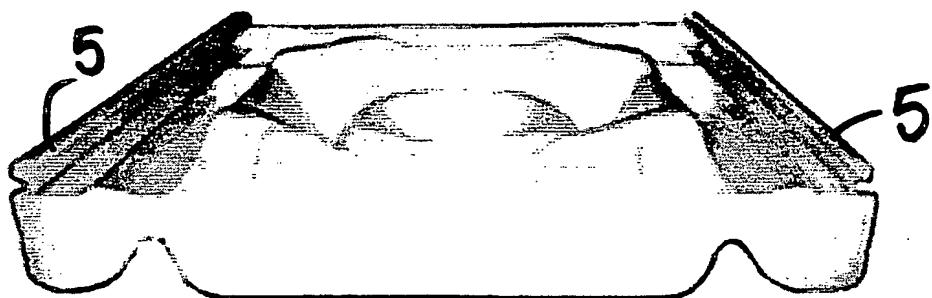


Fig. 7 B

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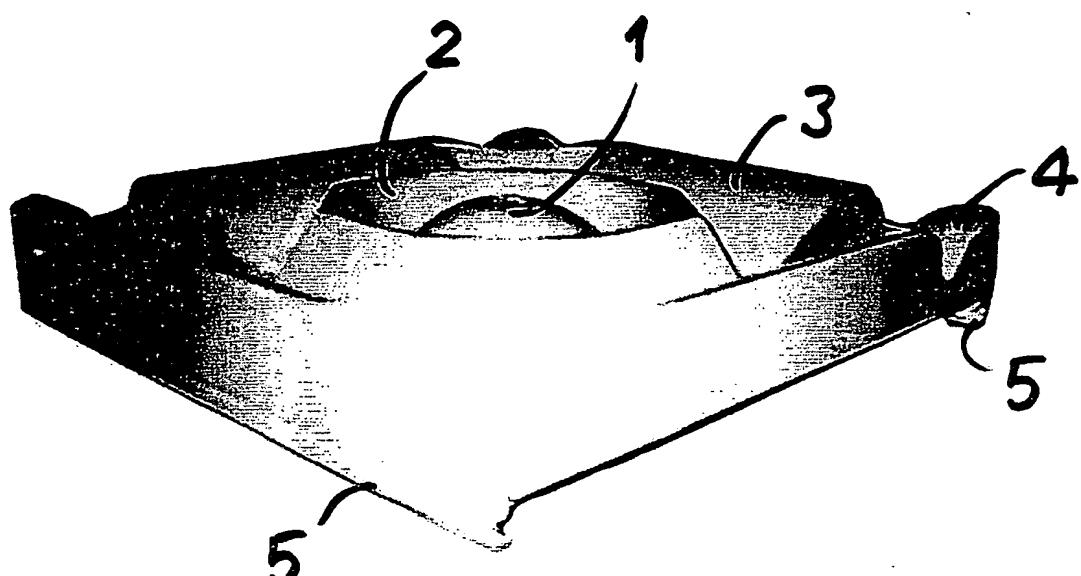


Fig. 8

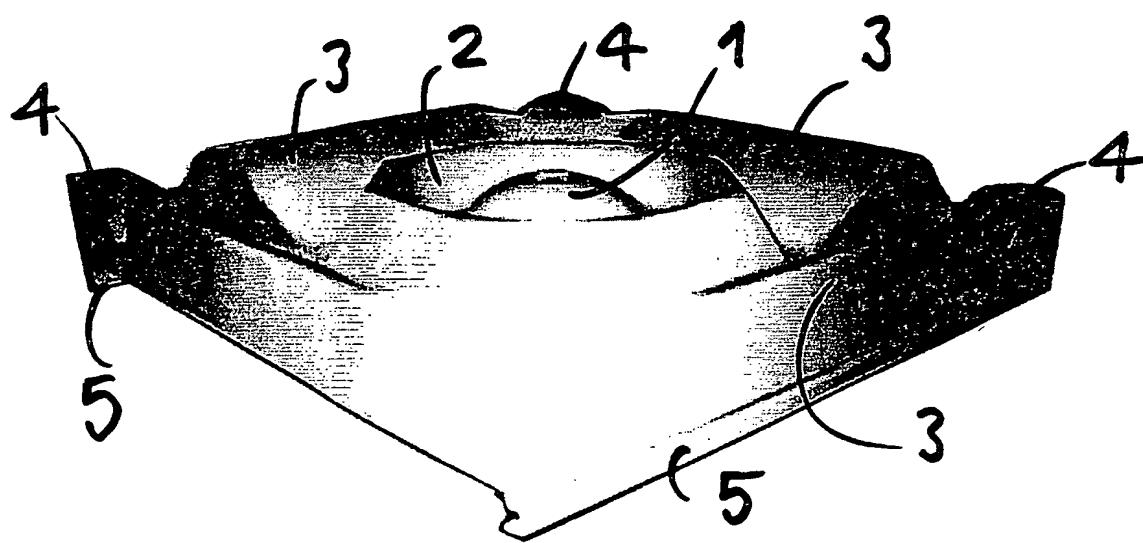


Fig. 9

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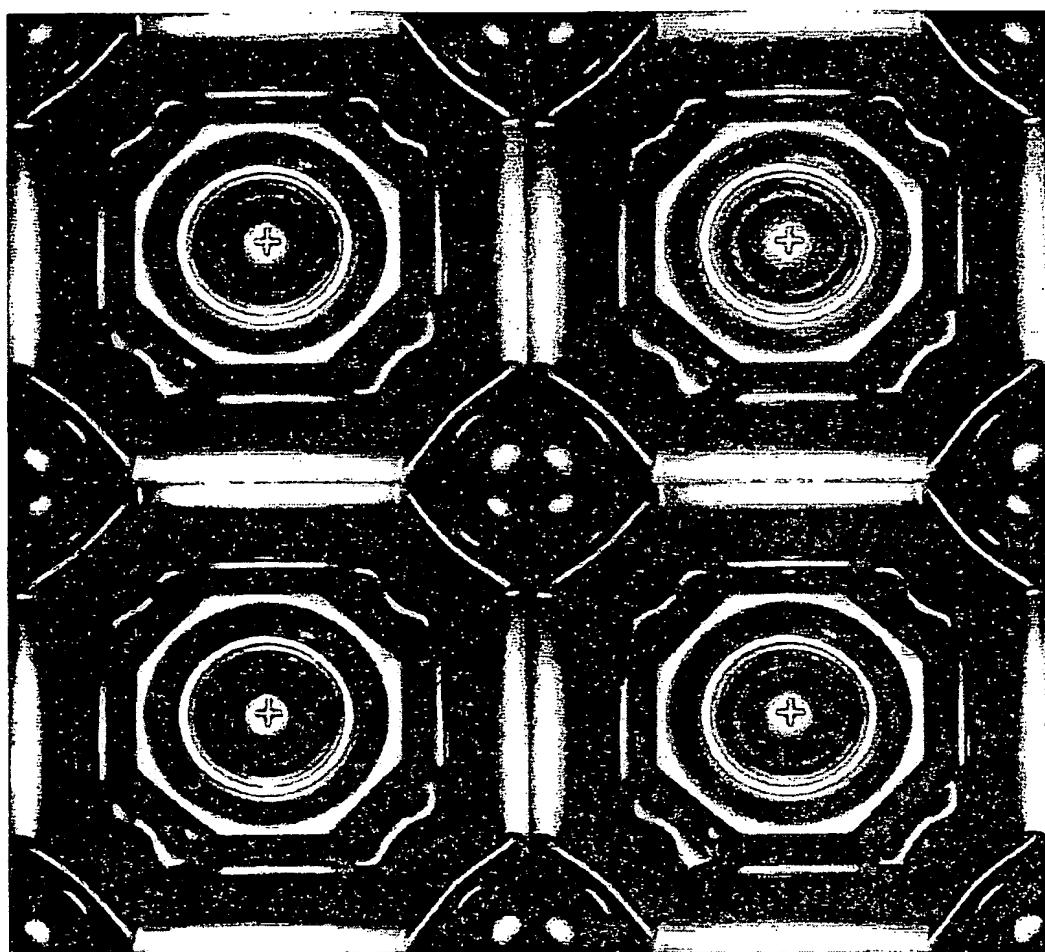


Fig. 10

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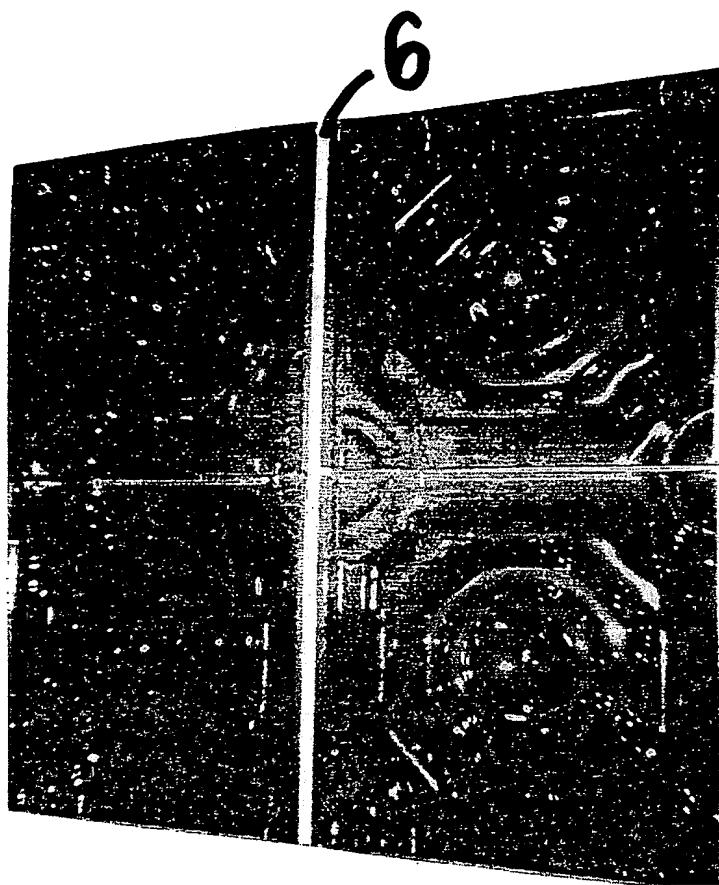


Fig. 11

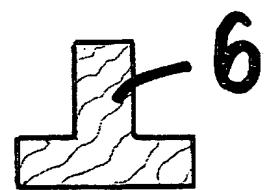


Fig. 11 A

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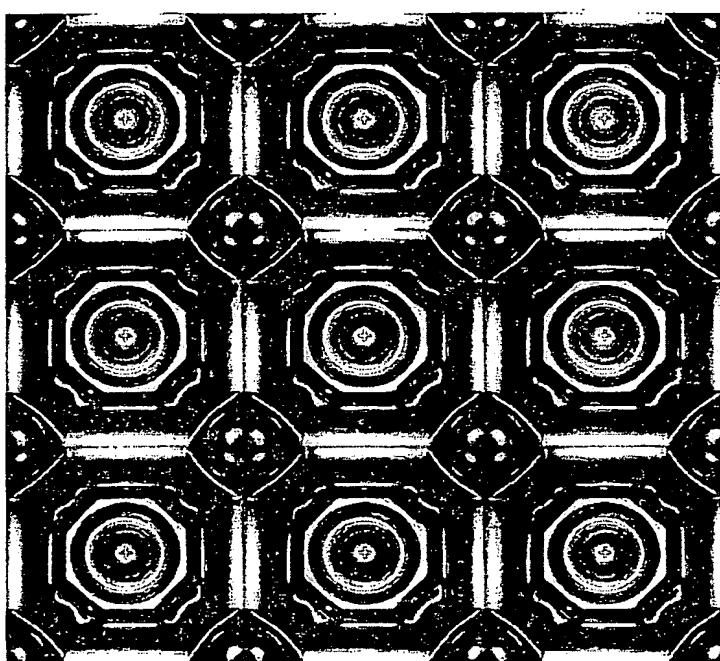


Fig. 12

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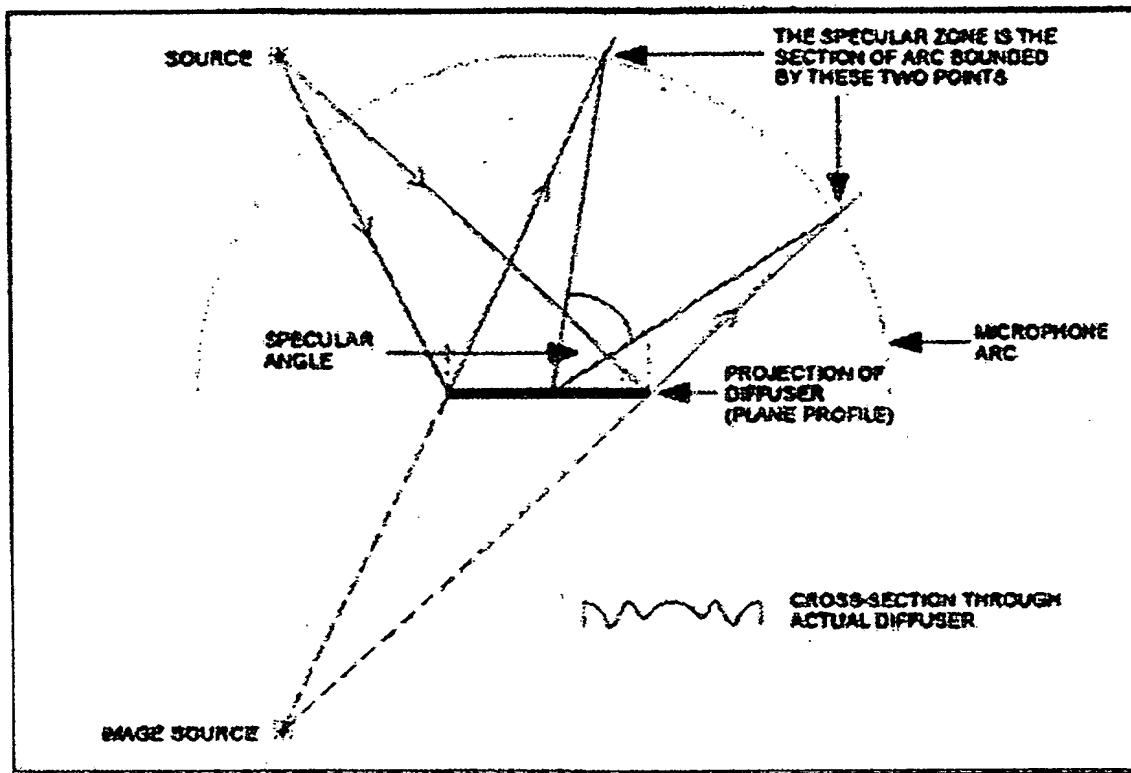


Fig. 13

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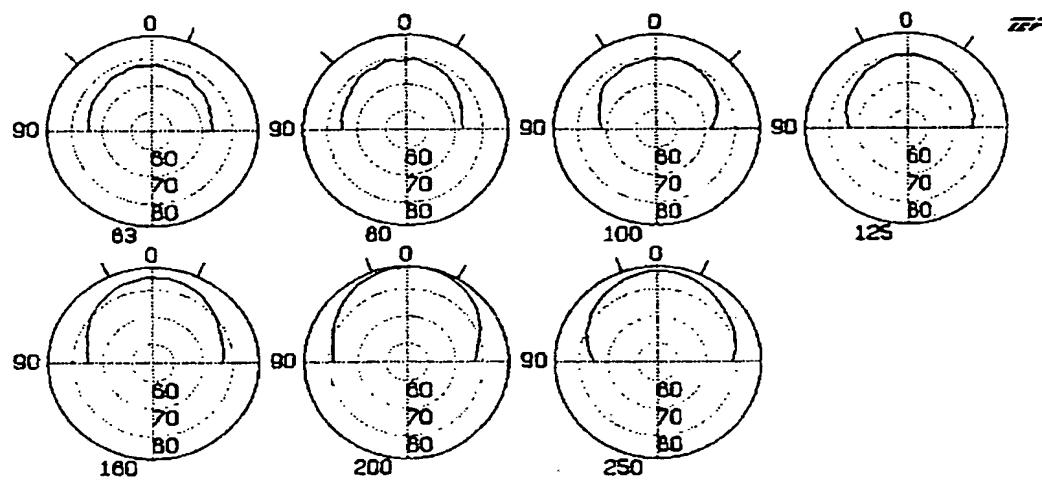


Fig. 14

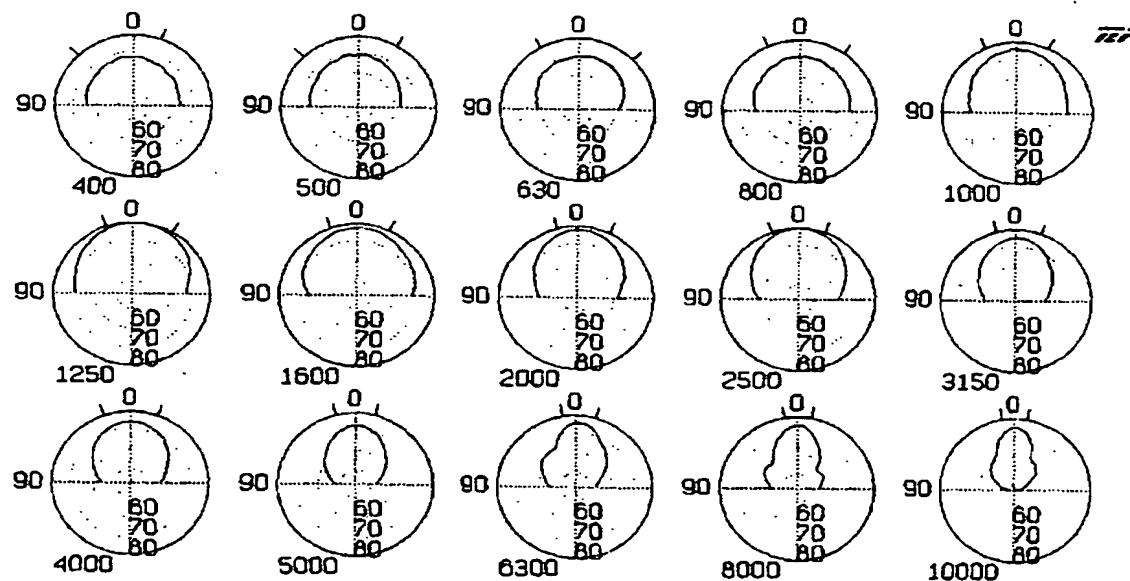


Fig. 15

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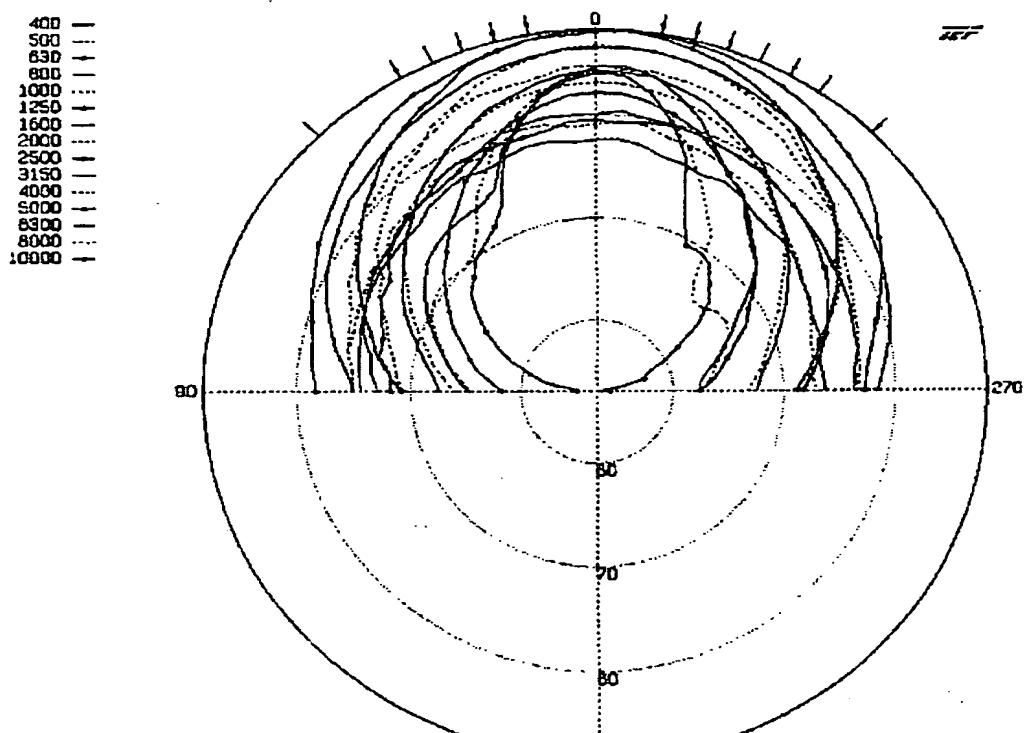
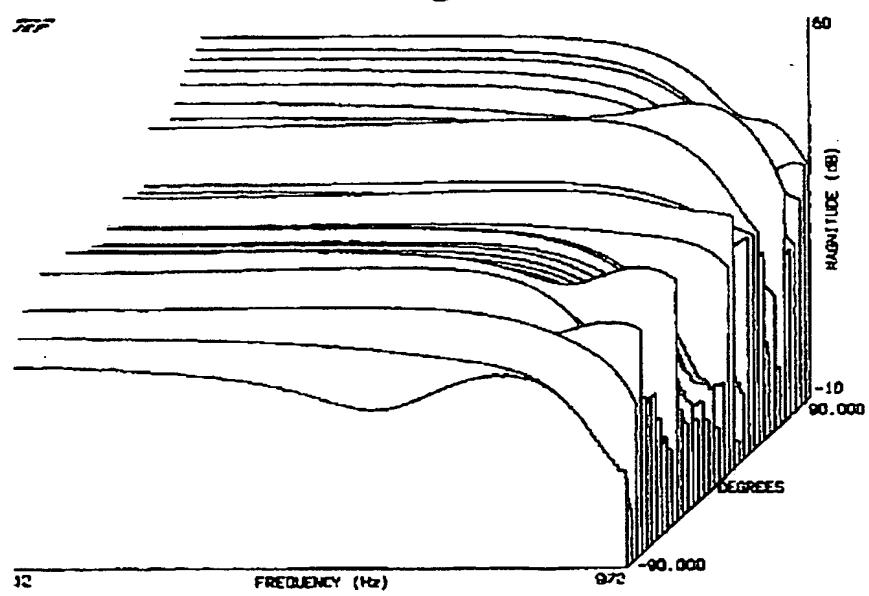


Fig. 16



FILE: NEWLOWLL.P3D  
Front to Back

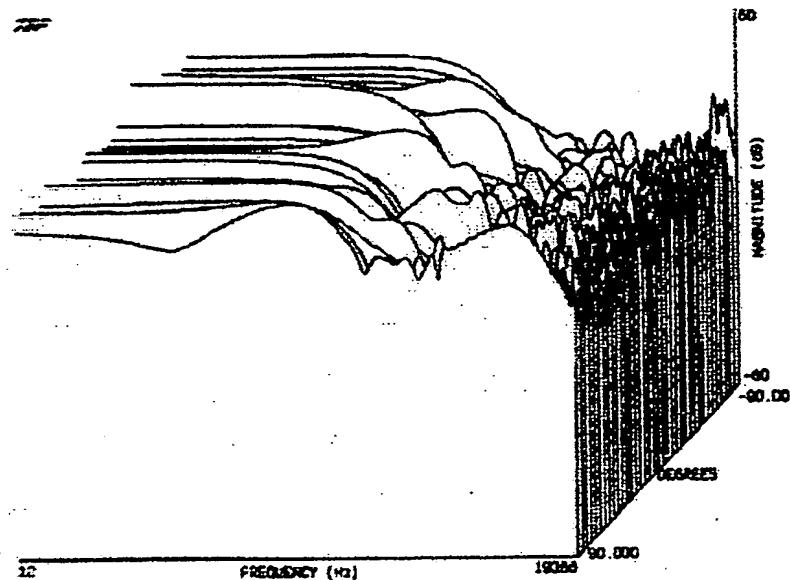
Fig. 17

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FILE: FULL.PSD  
Back to Front  
Angle Step = 3.0 degrees

0 dB is 0.00002 Pa

Job Description:  
FULL RANGE MEASUREMENT

**SWBEP:**

Start Frequency: 11.5 Hz  
Stop Frequency: 19388.4 Hz  
Sweep Time: 0.427 seconds  
Distance Resolution: 0.3 meters  
Frequency Resolution: 1113.6 Hz  
Time Resolution: 0.9 milliseconds  
Receive Delay: 4.502 milliseconds  
Start Angle: -90.000 degrees  
End Angle: 90.000 degrees  
Number of Samples: 1024  
Number of Curves: 37  
Octave Smoothing: 0.0 percentage

Fig. 18

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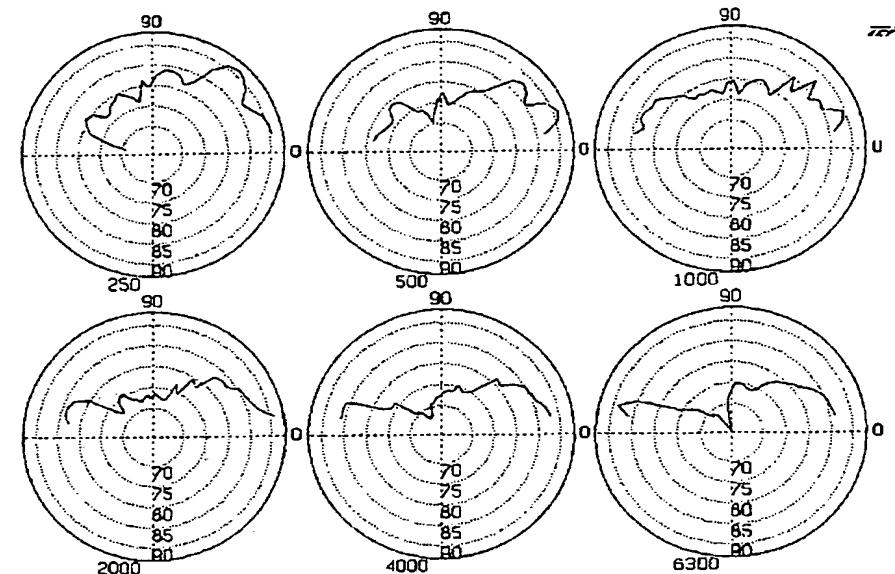


Fig. 19

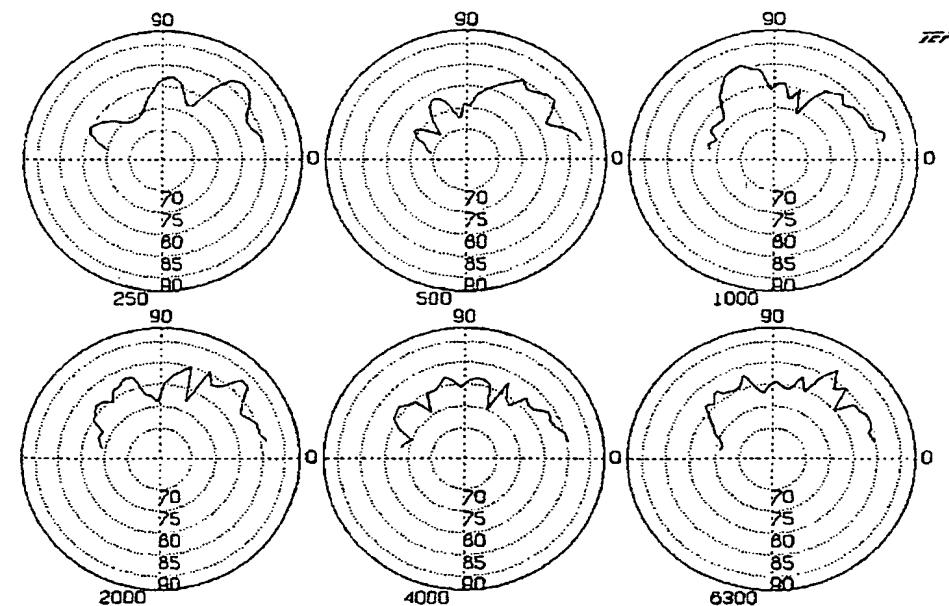


Fig. 20

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Fletcher-Munson Free Field Equal Loudness Contours

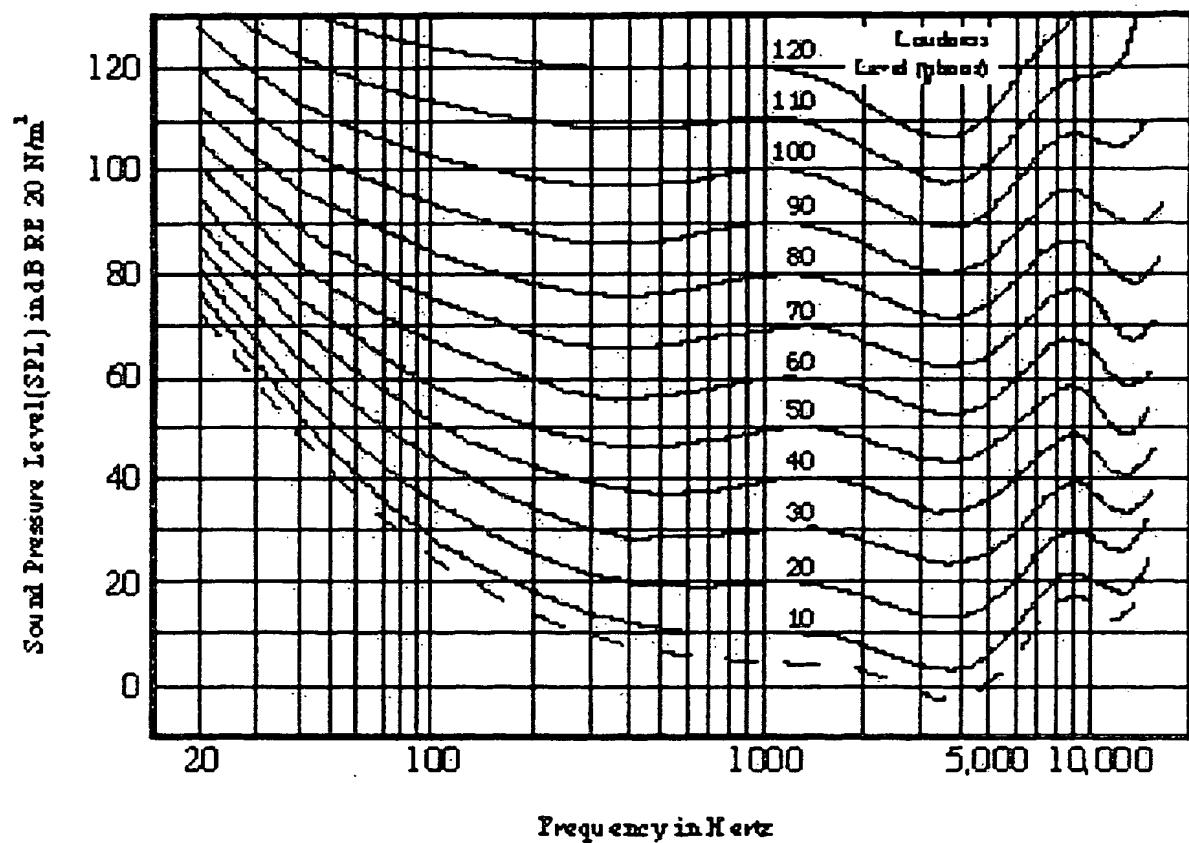


Fig. 21

**Table T1****U.S. Patent Documents (1)**

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3721050	Mar., 1973	Perina.	
4029170	Jun., 1977	Phillips.	
4312420	Jan., 1982	Gatti.	
4365113	Dec., 1982	Soma et al.	
4428454	Jan., 1984	Capaul et al.	
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5027920	Jul., 1991	D'Antonio et al.	
5117598	Jun., 1992	Livingston et al.	
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5780785	Jul., 1998	Eckel	181/295

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0 015 245	Sep., 1980	EP.
0 024 461	Mar., 1981	EP.
0 257 483	Mar., 1988	EP.
0 438 384 A1	Jul., 1991	EP.
560702	Sep., 1993	EP.
0 257 483 B1	Apr., 1994	EP.
0 777 403 A2	Jun., 1997	EP.
2451520	May., 1976	DE.
639164	Jan., 1982	CH.

**Table 2**  
**International bibliography related with diffusers: theory, design,  
measurements, classification**

1. D'ANTONIO, P., The Directional Scattering Coefficient: Experimental Determination, J. Audio Eng. Soc. 40, No.12. 997-1017 (December 1992).
2. D'ANTONIO, P., KONNERT, J.H. and KOVITZ, P. The Disc Project. Experimental Measurement of the Directional Scattering Properties of Architectural Acoustic Surfaces, IpaAAd2, 14 | 144 (June 1994).
3. COX, T.J. and LAM, Y.W. Evaluation of Methods by Predicting the Scattering from Simple Rigid Panels. Applied Acoustics.123-140 (1993).
4. COX, T.J. and LAM, Y.W., Prediction and Evaluation of the Scattering from Quadratic Residue Diffusers, J.Acoust.Soc.Am. 95(I). 297-305. (1994).
5. ISO 66:1997, Acoustics - Preferred frequencies. Geneva, Switzerland: International Organization for Standardization.
6. IEC 61260 (1995-08) Electroacoustics - Octave-band and fractional-octave-band filters. Geneva, Switzerland: International Electrotechnical Commission.
7. DRAFT AES-4id-xxxx , AES information document for room acoustics and sound reinforcement systems-Characterization and measurement of surface scattering uniformity , AES 2000.